```
R version 4.2.2 (2022-10-31 ucrt) -- "Innocent and Trusting"
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Platform: x86_64-w64-mingw32/x64 (64-bit)

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  Natural language support but running in an English locale

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Type 'q()' to quit R.

[Previously saved workspace restored]

> #Load the data from CSV file
> vapor <- read.csv("C://Users//yxa210024//Desktop//Masters//spring2023//Stats for DS//mini_proje
ct4//vapor.csv")
>
> #Attach the data for easy access to variables
> attach(vapor)
> difference <- theoretical - experimental
>
> #Create boxplots for theoretical and experimental data
> boxplot(theoretical, experimental, names = c("Theoretical", "Experimental"),main="BoxPlot")
> #Create boxplot for difference data
> boxplot(difference, main = "Boxplot for Difference")
> #Create normal QQ plot for difference data
> qqnorm(difference)
> qqline(difference)
> #Generate summary statistics for theoretical, experimental, and difference data
> summary(theoretical)
   Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
 0.2820  0.4175  0.6555  0.7606  1.0250  1.5500
> summary(experimental)
   Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
 0.2760  0.4305  0.6675  0.7599  1.0275  1.5400
> summary(difference)
      Min.    1st Qu.     Median       Mean    3rd Qu.       Max.
-0.0260000 -0.0100000  0.0040000  0.0006875  0.0085000  0.0290000
> #Perform paired t-test
> t.test(theoretical, experimental, paired = TRUE)

        Paired t-test

data:  theoretical and experimental
t = 0.19344, df = 15, p-value = 0.8492
alternative hypothesis: true mean difference is not equal to 0
95 percent confidence interval:
 -0.006887694  0.008262694
sample estimates:
mean difference
      0.0006875

> #Extract confidence interval from t-test result
> conf_interval <- t.test(theoretical, experimental, paired = TRUE)$conf.int
> conf_interval
[1] -0.006887694  0.008262694
attr(,"conf.level")
[1] 0.95
>
```